



PUBLIC WORKS ENGINEERING DIVISION

Date: Tuesday, May 26, 2015

To:

THH INC

Email:

Fax #: (573) 814-1128

From: Gene Williams, P.E.

Senior Staff Engineer

Application Number: PL2015067

Application Type: Engineering Plan Review

Application Name: Summit Innovation Center - Public Street, Stormwater, ESC

The Public Works Department received plans for this project on May 04, 2015. These plans are dated and were sealed on **April 30, 2015**. We have completed our review and offer the following comments:

Engineering Review

1. Please provide separate plans for the sanitary and the water line extension. These plans will need separate MDNR permits.
2. Please provide an overview sheet for the sanitary and the water line (i.e., on one sheet for each). It is difficult for our inspectors to determine their bearings without an overview sheet.
3. Provide a note stating that "...all construction shall follow the City of Lee's Summit Design and Construction Manual as adopted by Ordinance 5813. Where discrepancies exist between these plans and the Design and Construction Manual, the Design and Construction Manual shall prevail."
4. Please show a five (5) foot sidewalk on each side of Innovation Parkway.
5. Sheet C106: The profile view shows a "new 8" PVC San Sewer", but it is unclear where it is.
6. What is the plan for energy dissipation at the end of the reinforced concrete box? As shown, the RCB daylights in the middle of a slope which will likely erode in a severe manner. The City recommends that the box be extended to the toe of the slope, and appropriate energy dissipation measures installed.
7. Hydraulic grade lines for the design storm within the stormwater system should be shown on the profile view. If the system cannot manage the 100 year event without surcharging, then an overflow route will need to be established.
8. Sheet C501: The typical section for the road widening on Ward Road does not appear to be correct. Please check the Design and Construction Manual and revise as appropriate.
9. It would appear that turf reinforcement mat would be appropriate for the slope on the northeast portion of the project. Please specify the type of turf reinforcement mat and limits of installation.

10. There is a note on the erosion control plan (Drawing C102) stating Contractor shall submit his detailed erosion control plan for approval at the start of construction. A reviewable ESC plan shall be included with the Engineering Plans. To produce a reviewable ESC plan, significant improvements to the previous plan are necessary.
11. Use Lee's Summit Design and Construction Manual 2150 and 5100 for guidance. Lee's Summit's Design and Construction Manual Sections 2150 and 5100 are virtually the same as APWA Kansas City Metropolitan Chapter Construction and Material Specifications Sections 2150 and Design Criteria Section 5100. Lee's Summit has one amendment to Section 2150; the amendment prohibits the use of silt fence in swales, drainage ways, channels and other conduits, and it prohibits the use of silt fence to direct or divert water.
12. Four specific comments on the ESC plan sheet are: 1. The extent of the land disturbance area was not found on the ESC plan sheet. Include the size of the land disturbance area. 2. Include detail drawings for proposed ESC devices. 3. If there is a MDNR requirement for sediment basin(s) on a project the size of Summit Innovation Center, include sediment basin(s) in your ESC plans. Details including, but not limited to volume required and volume provided in the sediment basins will be required. 4. The ESC plan will need to be significantly upgraded.

Traffic Review

1. The southbound left turn lane along Ward Road at Innovation Pkwy must be at least 200' in length plus the taper shown on the plans.
2. Include a signing plan.
3. The marking arrows need to be located in accordance with the City's standard details.
4. Additional dimensioning or notes for the length or beginning/ending of each marking line (and radius if applicable) need to be provided on the plans.
5. Consider using 250W lighting fixtures; I am concerned the 400W fixtures and lighting levels designed will be too bright for the setting of Innovation Parkway. Refer to prior comments emailed on 4/13/15: "I would be comfortable with 250W HPS fixtures and even target an avg illumination between 1.3 and 1.7 since Innovation Pkwy is more of a commercial local/collector hybrid and the surrounding Ward and Tudor will be well lighted at the arterial standards." The design standard in the DCM has been met, so no change is required, however the suggestion to lower the avg. illumination is recommended.

Tudor Road used 40' poles with 250W luminaires.

In order to calculate the Public Works' Engineering Plan Review and Inspection Fee, a sealed Engineer's Opinion of Probable Construction Costs shall accompany your final submittal copies. The itemized estimate (material and installation) shall be sufficiently broken down and shall include the following items, as applicable.

- Public infrastructure, both onsite and offsite.
- Private street construction, including parking lots and driveways.
- Sidewalks located within the right-of-way.
- ADA accessible ramps.

- Sanitary sewer manholes and piping between manholes, including private mains.
- Connection of the building sanitary sewer stub to the public main.
- Waterlines larger than 2 inches in diameter, valves, hydrants, and backflow preventer with vault, if outside the building.
- Stormwater piping greater than 6 inches in diameter, structures, and detention / retention facilities - public or private.
- Water quality features installed to meet the 40-hour extended duration detention requirements.
- Grading for detention / retention ponds.
- Grading to establish proper site drainage.
- Utility infrastructure adjustments to finished grade (i.e. manhole lids, water valves, etc.).
- Erosion and sediment control devices required for construction.
- Re-vegetation and other post-construction erosion and sediment control activities.

If you have any questions or comments, please contact me, Gene Williams either at (816) 969-1800 or e-mail to Gene.Williams@cityofls.net.

Sincerely,

Original Signed

Gene Williams, P.E.
Senior Staff Engineer

cc: Development Engineering Project File